

REMARKS

In accordance with the Office Action, claims 34-38 are currently under examination. Claims 42-43 are canceled herein without prejudice, having been deemed by the Examiner to be directed to an independent and non-elected invention. Claims 35-38 are amended herein to more clearly define terms recited therein. Accordingly, claim 34, as amended, and claims 35-38 are under consideration.

Any amendment, however, is not to be construed as abandonment of any subject matter of the originally filed application. Accordingly, it is to be understood that Applicant reserves the right to reintroduce subject matter deleted from the application by the foregoing amendments and to file one or more divisional, continuation, and/or continuation in part applications directed to such subject matter.

Support for the amendments to the claims is found throughout the specification and in the original claims. Support for amendment to claim 34 is found in the Specification as filed, including, for example, at page 14, lines 7 through 13 and lines 21 through 30, which describes particular domain residues and amino acids, and at page 4, lines 13 through 16, which describes that the extracellular domains are able to act cooperatively to form a ligand binding site. No issue of new matter is introduced by these amendments.

Rejections under 35 USC § 112

Claims 34-38 have been rejected under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts that the specification does not convey to the artisan that the Applicant had possession at the time of the invention of the claimed nucleic acid sequence encoding a chimeric receptor. Applicant respectfully disagrees. The instant Application describes and details the construction, expression and activity of chimeric receptors including component cassettes and domains. Applicant has above amended claim 34, without prejudice to further prosecution. Claim 34 is directed to nucleic acid sequence encoding chimeric receptor comprising specific domains and particular sequences, each and any of which are supported by written description in the specification, including at page 14. Applicant submits that claims 34-38 fully comply with the written description requirement.

Claims 34-38 have been rejected under 35 USC § 112, first paragraph, for allegedly containing subject matter which was not described in the specification in such a way as to enable one of skill in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner asserts that the specification does not disclose how to make and/or use the instant invention, providing insufficient guidance and requiring undue experimentation by the skilled artisan to practice the claimed invention. Applicant respectfully disagrees, and in view of Applicant's arguments and above amendments, the rejection, is respectfully traversed. Applicant has above amended claim 34 without prejudice to further and future prosecution. Amended claim 34 sets out the amino acid residues of the spacer, transmembrane and intracellular domains of the chimeric receptor. In addition, claim 34 specifies that "the extracellular ligand association domains of each chain are able to act cooperatively to form a ligand binding site" – thus, the two extracellular ligand association domains are capable of binding to the same ligand. This cooperative binding enables the two chains of the chimeric receptor to be brought together and signal. The spacer domain of claim 34 is derived from CD8 and comprises amino acid substitutions such that the first and second polypeptide chains remain unassociated except in the presence of bound ligand. The specification Examples, including Figure 4 and 5, demonstrate that the chimeric receptor of the claims does not signal constitutively, i.e. there is no signaling in the absence of bound ligand. Signalling occurs when the extracellular domains of the chimeric receptor act co-operatively to bind ligand. Clearly, undue experimentation is not required to practice the invention of claims 34-38.

In view of the support presented in the specification and available in the art at the time of filing, and arguments and amendments presented herein, Applicant respectfully requests that the Examiner reconsider and withdraw the rejections of claims 34-38 under 35 U.S.C. § 112, first paragraph.

Particularity and Distinctiveness of the Claims

The Examiner has rejected claims 35-38 under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention.

Claim 35 is rejected as indefinite in the recitation of "The nucleic acid sequence In

association with ...” because the Examiner asserts that it is not clear what is meant. Applicant points out that claim 35 refers to a nucleic acid sequence encoding a chimeric receptor, wherein the nucleic acid sequence is associated with a carrier.

Claim 38 is rejected as indefinite in the recitation of “wherein the nucleic acid sequence is on a plasmid”, the Examiner remarking that it is not clear what is meant, i.e. if the product is a plasmid comprising the nucleic acid sequence of claim 34. Applicant asserts that it is clear to the skilled artisan that claim 38 refers to a nucleic acid sequence encoding a chimeric receptor, wherein the nucleic acid sequence is on a plasmid, i.e. it is located on a plasmid.

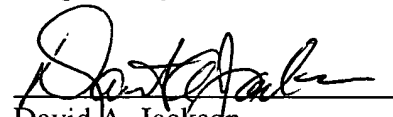
Fees

No additional fees are believed to be necessitated by this amendment. However, should this be an error, authorization is hereby given to charge Deposit Account No. 11-1153 for any underpayment or to credit any overpayment.

Conclusion

It is submitted, therefore, that the claims are in condition for allowance. No new matter has been introduced. Allowance of all claims at an early date is solicited. In the event that there are any questions concerning this amendment, or application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of this application may be expedited.

Respectfully submitted,



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